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CLAIMS:

What is claimed is:

1. A method in a data processing system for
5 automatically distributing and installing software file
packages throughout a multi-tiered computer architecture
hierarchy, said hierarchy including a global tier, a hub
tier that is below said global tier, and a target tier
that is below said hub tier, said method comprising the
10 steps of:
 - receiving, within a global computer system that is
located in said global tier, a distribution request to
distribute a file package to a target computer system
that is located in said target tier;
 - 15 starting, by said global computer system, a
distribution process in said hub computer system;
distributing said file package and an installation
process from said global computer system to said hub
computer system that is located in said hub tier;
 - 20 automatically distributing said file package and
said installation process to said target computer system
from said hub computer system utilizing said distribution
process; and
 - automatically installing, by said target computer
25 system, said file package utilizing said installation
process.
2. The method according to claim 1, further comprising
the steps of:
 - 30 providing a three-tier CORBA network, said CORBA
network including a hub CORBA ORB coupled to a second
spoke CORBA ORB, and said spoke CORBA ORB being coupled

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to a gateway CORBA ORB, wherein said hub CORBA ORB occupies said hub tier of said architecture, said spoke CORBA ORB occupies a spoke tier of said architecture, said spoke tier between said hub tier and a gateway tier, and said gateway CORBA ORB occupies said gateway tier, said gateway tier being located between said gateway tier and said target tier; and

coupling said global computer system to said three-tier CORBA network, said global computer system occupies a top tier of said architecture over said first tier, said global computer system functioning as a CORBA ORB and treating said hub CORBA ORB as a managed node.

3. The method according to claim 1, further comprising the steps of:

assigning a unique request identifier to said distribution request; and

tracking processing of said distribution request as it is processed by said global computer system, said hub computer system, and said target computer system using said unique request identifier.

4. The method according to claim 1, further comprising the steps of:

determining by said global computer system whether said distribution of said file package and said installation process from said global computer system to said hub computer system was successful;

in response to a determination that said distribution was unsuccessful, re-attempting said distribution.

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5. The method according to claim 1, further comprising the steps of:

including a queue within said global computer system for storing distribution requests;

5 in response to receiving said distribution request, placing said distribution request in said queue; and processing a next request from said queue utilizing said global computer system.

10 6. The method according to claim 5, further comprising the steps of:

determining by said global computer system whether said distribution of said file package and said installation process from said global computer system to
15 said hub computer system was successful;

in response to a determination that said distribution was unsuccessful, re-queueing said distribution request by restoring said distribution request in said queue; and

20 said global computer system making another attempt to distribute said distribution request without requiring that said distribution request be resubmitted to said global computer system.

25 7. The method according to claim 1, further comprising the steps of:

in response to receiving said distribution request within said global computer system, locking, by said global computer system, said hub computer system to
30 prevent said hub computer system from processing other requests while said hub computer system is processing said distribution request.

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8. The method according to claim 7, further comprising the steps of:

locking said hub computer system using a unique request identifier that identifies said distribution
5 request.

9. The method according to claim 7, further comprising the steps of:

determining whether said hub computer system is
10 available prior to said global computer system locking said hub computer system;

in response to a determination that said hub computer system is unavailable, waiting until said hub computer system becomes available; and

15 in response to a determination that said hub computer system is available, locking said hub computer system.

10. The method according to claim 1, further comprising
20 the steps of:

including a plurality of file package requests within said distribution request, each one of said file package requests being a request to either install a particular file package or remove a particular file
25 package; and

including in said distribution request an installation script for each one of said file requests that is a request to install a particular file package.

30 11. The method according to claim 1, further comprising the steps of:

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receiving, within said global computer system that is located in said global tier, a distribution request to distribute a plurality of file package requests to a target computer system that is in said target tier;

5 each one of said file package requests being a request to either install a particular file package on said target or to remove a particular file package from said target;

including in said distribution request an
10 installation script for each one of said file requests that is a request to install a particular file package;

starting, by said global computer system, a distribution process in said hub computer system;

distributing said plurality of file packages and an
15 installation process from said global computer system to said hub computer system that is located in said hub tier;

utilizing said distribution process within said hub to automatically distribute to said target computer
20 system ones of said file package requests that are requests to remove a particular file package from said target computer system;

automatically removing, by said target computer system, said particular file for each of said ones of
25 said file package requests that are requests to remove a particular file;

utilizing said distribution process within said hub to automatically distribute to said target computer system ones of said file package requests that are
30 requests to install a particular file package on said target computer system;

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automatically installing, by said target computer system, said particular file for each of said ones of said file package requests that are requests to install a particular file; and

5 said removal requests being executed prior to said installation requests.

12. A data processing system for automatically distributing and installing software file packages
10 throughout a multi-tiered computer architecture hierarchy, said hierarchy including a global tier, a hub tier that is below said global tier, and a target tier that is below said hub tier, said system comprising:

15 a global computer system that is located in said global tier receiving a distribution request to distribute a file package to a target computer system that is located in said target tier;

 said global computer system starting a distribution process in said hub computer system;

20 said global computer system distributing said file package and an installation process to said hub computer system that is located in said hub tier;

 said hub computer system utilizing said distribution process to automatically distributing said file package
25 and said installation process to said target computer system; and

 said target computer system automatically installing said file package utilizing said installation process.

30 13. The system according to claim 12, further comprising:

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a three-tier CORBA network, said CORBA network including a hub CORBA ORB coupled to a second spoke CORBA ORB, and said spoke CORBA ORB being coupled to a gateway CORBA ORB, wherein said hub CORBA ORB occupies said hub
5 tier of said architecture, said spoke CORBA ORB occupies a spoke tier of said architecture, said spoke tier between said hub tier and a gateway tier, and said gateway CORBA ORB occupies said gateway tier, said gateway tier being located between said gateway tier and
10 said target tier; and

said global computer system coupled to said three-tier CORBA network, said global computer system occupies a top tier of said architecture over said first tier, said global computer system functioning as a CORBA ORB
15 and treating said hub CORBA ORB as a managed node.

14. The system according to claim 11, further comprising:

a unique request identifier assigned to said
20 distribution request; and

said unique request identifier for tracking processing of said distribution request as it is processed by said global computer system, said hub computer system, and said target computer system.

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15. The system according to claim 11, further comprising:

said global computer system determining whether said distribution of said file package and said installation
30 process from said global computer system to said hub computer system was successful;

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in response to a determination that said distribution was unsuccessful, said global computer system re-attempting said distribution.

5 16. The system according to claim 11, further comprising:

a queue included within said global computer system for storing distribution requests;

10 in response to receiving said distribution request, said distribution request being placed in said queue; and said global computer system processing a next request from said queue.

15 17. The system according to claim 16, further comprising:

said global computer system determining whether said distribution of said file package and said installation process from said global computer system to said hub computer system was successful;

20 in response to a determination that said distribution was unsuccessful, said distribution request being re-queueing said distribution request by restoring said distribution request in said queue; and

25 said global computer system making another attempt to distribute said distribution request without requiring that said distribution request be resubmitted to said global computer system.

30 18. The system according to claim 11, further comprising:

in response to receiving said distribution request within said global computer system, said global computer

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system locking said hub computer system to prevent said hub computer system from processing other requests while said hub computer system is processing said distribution request.

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19. The system according to claim 18, further comprising:

10 said hub computer system being locked using a unique request identifier that identifies said distribution request.

20. The system according to claim 18, further comprising:

15 said global computer system determining whether said hub computer system is available prior to said global computer system locking said hub computer system;

 in response to a determination that said hub computer system is unavailable, said global computer system waiting until said hub computer system becomes
20 available; and

 in response to a determination that said hub computer system is available, said global computer system locking said hub computer system.

25 21. The system according to claim 11, further comprising:

 said distribution request including a plurality of file package requests, each one of said file package requests being a request to either install a particular
30 file package or remove a particular file package; and

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said distribution request including an installation script for each one of said file requests that is a request to install a particular file package.

- 5 22. The system according to claim 11, further comprising:

said global computer system that is located in said global tier receiving a distribution request to distribute a plurality of file package requests to a target computer system that is in said target tier;

each one of said file package requests being a request to either install a particular file package on said target or to remove a particular file package from said target;

15 said distribution request including an installation script for each one of said file requests that is a request to install a particular file package;

said global computer system starting a distribution process in said hub computer system;

20 said global computer system distributing said plurality of file packages and an installation process to said hub computer system that is located in said hub tier;

said hub computer system utilizing said distribution process included in said hub computer system to automatically distribute to said target computer system ones of said file package requests that are requests to remove a particular file package from said target computer system;

30 said target computer system automatically removing said particular file for each of said ones of said file

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package requests that are requests to remove a particular file;

said hub computer system utilizing said distribution process within said hub computer system to automatically
5 distribute to said target computer system ones of said file package requests that are requests to install a particular file package on said target computer system;

said target computer system automatically installing said particular file for each of said ones of said file
10 package requests that are requests to install a particular file; and

said removal requests being executed prior to said installation requests.

15 23. A computer program product in a data processing system for automatically distributing and installing software file packages throughout a multi-tiered computer architecture hierarchy, said hierarchy including a global tier, a hub tier that is below said global tier, and a
20 target tier that is below said hub tier, said product comprising:

instruction means for receiving, within a global computer system that is located in said global tier, a distribution request to distribute a file package to a
25 target computer system that is located in said target tier;

instruction means for starting, by said global computer system, a distribution process in said hub computer system;

30 instruction means for distributing said file package and an installation process from said global computer

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system to said hub computer system that is located in said hub tier;

instruction means for automatically distributing said file package and said installation process to said target computer system from said hub computer system
5 utilizing said distribution process; and

instruction means for automatically installing, by said target computer system, said file package utilizing said installation process.

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24. The product according to claim 23, further comprising:

a three-tier CORBA network, said CORBA network including a hub CORBA ORB coupled to a second spoke CORBA
15 ORB, and said spoke CORBA ORB being coupled to a gateway CORBA ORB, wherein said hub CORBA ORB occupies said hub tier of said architecture, said spoke CORBA ORB occupies a spoke tier of said architecture, said spoke tier between said hub tier and a gateway tier, and said
20 gateway CORBA ORB occupies said gateway tier, said gateway tier being located between said gateway tier and said target tier; and

instruction means for coupling said global computer system to said three-tier CORBA network, said global
25 computer system occupies a top tier of said architecture over said first tier, said global computer system functioning as a CORBA ORB and treating said hub CORBA ORB as a managed node.

30 25. The product according to claim 23, further comprising:

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instruction means for assigning a unique request identifier to said distribution request; and

instruction means for tracking processing of said distribution request as it is processed by said global computer system, said hub computer system, and said target computer system using said unique request identifier.

26. The product according to claim 23, further comprising:

instruction means for determining by said global computer system whether said distribution of said file package and said installation process from said global computer system to said hub computer system was successful;

in response to a determination that said distribution was unsuccessful, instruction means for re-attempting said distribution.

27. The product according to claim 23, further comprising:

instruction means for including a queue within said global computer system for storing distribution requests;

in response to receiving said distribution request, instruction means for placing said distribution request in said queue; and

instruction means for processing a next request from said queue utilizing said global computer system.

28. The product according to claim 27, further comprising:

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instruction means for determining by said global computer system whether said distribution of said file package and said installation process from said global computer system to said hub computer system was

5 successful;

in response to a determination that said distribution was unsuccessful, instruction means for re-queueing said distribution request by restoring said distribution request in said queue; and

10 said global computer system making another attempt to distribute said distribution request without requiring that said distribution request be resubmitted to said global computer system.

15 29. The product according to claim 23, further comprising:

in response to receiving said distribution request within said global computer system, instruction means for locking, by said global computer system, said hub
20 computer system to prevent said hub computer system from processing other requests while said hub computer system is processing said distribution request.

25 30. The product according to claim 29, further comprising:

instruction means for locking said hub computer system using a unique request identifier that identifies said distribution request.

30 31. The product according to claim 29, further comprising:

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instruction means for determining whether said hub computer system is available prior to said global computer system locking said hub computer system;

in response to a determination that said hub
5 computer system is unavailable, instruction means for waiting until said hub computer system becomes available; and

in response to a determination that said hub computer system is available, instruction means for
10 locking said hub computer system.

32. The product according to claim 23, further comprising:

instruction means for including a plurality of file
15 package requests within said distribution request, each one of said file package requests being a request to either install a particular file package or remove a particular file package; and

instruction means for including in said distribution
20 request an installation script for each one of said file requests that is a request to install a particular file package.

33. The product according to claim 23, further
25 comprising:

instruction means for receiving, within said global computer system that is located in said global tier, a distribution request to distribute a plurality of file package requests to a target computer system that is in
30 said target tier;

each one of said file package requests being a request to either install a particular file package on

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said target or to remove a particular file package from said target;

instruction means for including in said distribution request an installation script for each one of said file requests that is a request to install a particular file package;

instruction means for starting, by said global computer system, a distribution process in said hub computer system;

instruction means for distributing said plurality of file packages and an installation process from said global computer system to said hub computer system that is located in said hub tier;

instruction means for utilizing said distribution process within said hub to automatically distribute to said target computer system ones of said file package requests that are requests to remove a particular file package from said target computer system;

instruction means for automatically removing, by said target computer system, said particular file for each of said ones of said file package requests that are requests to remove a particular file;

instruction means for utilizing said distribution process within said hub to automatically distribute to said target computer system ones of said file package requests that are requests to install a particular file package on said target computer system;

instruction means for automatically installing, by said target computer system, said particular file for each of said ones of said file package requests that are requests to install a particular file; and

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said removal requests being executed prior to said
installation requests.